

APPENDIX A. FINANCIAL ANALYSIS PROCEDURES

STEP 1. COLLECT FINANCIAL STATEMENTS

You will need to collect two types of financial statements, the Income Statement and the Balance Sheet, from the company. These statements provide the financial results of operations for the company's fiscal year, an accounting for the resources of a business, and the claims against those resources by lenders and owners.

Since the expressed concern is about the *financial contribution of the product* that DoD purchases, you should collect these documents at the *corporate level* and *business unit or product level*.

Statement Types

- . Consolidated Income Statement (corporate level)
- . Consolidated Balance Sheet (corporate level)
- . Income Statement (at the lowest appropriate level, product or business unit)
- Balance Sheet (at the lowest appropriate level, product or business unit)

Time Span

- . Collect Income Statements for a five-year period: Historical (the past two years), Current (the current year), and Projected (the next two years).
- . Collect Balance Sheets for a three-year period: Historical (the past two years) and Current (the current year).

Both types of financial statements are discussed in the following sections, with calculations given for the information needed, and example worksheets.

Income Statement Description

The Income Statement summarizes the financial performance of the firm over a period of time, normally one year. A standard format is usually maintained in accordance with the *matching concept* in which sales (revenues), or the amounts received from selling goods and services, are matched against the associated expenses and costs incurred while operating the company. Table A-1 depicts the calculations you need to make for the Income Statement.

Table A-1. Income Statement Example

Income Statement
(January 1 through December 31, 19XX)

Sales	The revenue obtained for the product or service delivered.
- Cost of Goods Sold	All costs associated with converting raw materials into finished products.
= Gross Income	Income generated directly from the sale of products or services.
General and Admin Expenses	The cost of office space, support staff, and other such expenses.
- Depreciation	The estimated cost associated with or degree to which an asset is used up in producing a product (e.g., land is not depreciated).
= Operating Income¹	The earnings generated from units sold minus expenses (cost of goods sold, selling, general and administrative expenses).
+ Non-operating Income	Income that is not derived from the core business (e.g., interest income).
- Non-Operating Expenses	Expenses that are not derived from the core business (e.g., a one-time restructuring expense).
Earnings Before Interest & Taxes (EBIT)	Income before financing expenses and income taxes.
- Interest	Financing expenses on debt.
= Earnings Before Taxes	Taxable earnings of the firm.
- Taxes	Corporate income taxes.
= Net Income	The “bottom line” income generated for the period.

¹ operating income represents the core earnings of a business before financing, taxes, and other non-operating income and expenses are taken into consideration.

Balance Sheet Description

The Balance Sheet provides a “snapshot” of a firm’s financial position on a given day while the Income Statement covers a period of time. The Balance Sheet lists the assets, liabilities, and owner’s equity on the date stated in the heading.

- . Assets, which represent future economic benefits, are listed in descending order of their liquidity, i.e., how quickly they can be converted into cash.
- . Liabilities, which represent obligations, are divided into debt and equity.
 - ⇒ Debt is listed in order of priority, i.e., which obligations need to be paid first or who would be paid first in the event of a liquidation.
 - ⇒ Equity is derived by subtracting liabilities from assets. In other words, equity equals the value of assets after subtracting obligations owed to debt holders.

Figure A-1 depicts an example of a format for a Balance Sheet.

Figure A-1. Balance Sheet Example Format

Balance Sheet (December 31, 19XX)

<u>Assets</u>	<u>Liabilities</u>
Current:	<u>Debt</u>
Cash	Current:
Marketable Securities	Accounts Payable
Accounts Receivable	Notes Payable
Inventory	Current Maturities on Long Debt
Fixed:	Long-Term Liabilities:
Property, Plant & Equipment	Long-Term Debt
Land	<u>Equity</u>
Buildings	Common Stock
Machinery	Retained Earnings

The Balance Sheet tells you how healthy a company is at a particular time. You can ascertain whether the amounts listed for current assets (the first items on the Balance Sheet, such as cash, marketable securities, accounts receivable, which will shortly be turned into cash) exceed the current liabilities, or claims on the business that need to be paid in the near future. By looking at the fixed assets (property, plant, and equipment) and corresponding accumulated depreciation, you can see whether the company’s production equipment is old or relatively new. If accumulated depreciation is a high percentage of fixed assets, production equipment may be obsolete; a lower percentage may indicate newer production equipment.

The Balance Sheet also shows you how the company is capitalized, or how it finds its growth, e.g., whether there is a high level of long-term debtor equity (common stock) financing. When contrasted with a Balance Sheet from an earlier period, you can identify problem areas or trends which may require additional evaluation or inquiry.

STEP 2. CALCULATE PROFITABILITY

Perform a Profitability Screen Using Operating Profit Margin

In Step 2, using the financial data collected, you will now perform a **profitability** screen and determine whether the company of concern is profitable. The results of this screen will help you determine whether any further financial analysis is necessary.

The best measure of the financial viability of a firm is the degree to which it is profitable (i.e., making money). The primary measure of profitability for the purposes of our financial analysis is Operating Profit Margin:

$$\text{Operating Profit Margin (\%)} = \text{Operating Income} / \text{Sales} \times 100$$

Operating Income represents the company’s core earnings. It is equal to Sales minus Operating Expenses. Operating Income excludes interest payments and extraordinary items.

You will need to calculate the operating profit margin for the company of concern for the **five-**year period mentioned in the Step 1 section. Completion of the following summary table, Table A-2, will allow you to compute Operating Profit Margin and analyze profitability trends from the income statement. **Note:** Remember that you need *unconsolidated* divisional data, that is, data from the Income Statement at the lowest appropriate level, product or business unit. You will have to ask the company for this data.

Table A-2. Summary Table

	Historical		Current	Projected	
Year	-2	-1	0	+1	+2
units					
Sales (Revenue)					
- Cost of Goods Sold					
- General & Admin Expenses					
- Depreciation					
= Operating Income (01)					
Operating Profit Margin (%) =01 / Sales x 100					

At the corporate level, Operating Income can be determined from the consolidated Income Statement, which typically is provided in the format previously described. However, when determining the effect on profitability of a specific product being purchased by the Department of Defense, you need to calculate Operating Profit Margin at the lowest appropriate level, i.e., at the product or business unit level. Sometimes the Operating Income is not provided or cannot be obtained directly in the standard Income Statement format at this low level within the corporation. When this is the case, use the following to obtain Operating Income, which you can then use to compute Operating Profit Margin.

$$\text{Operating Income} = \text{Sales} - \text{Direct Costs} - \text{Indirect Costs} - \text{Overhead} - \text{General and Admin Expenses}$$

When Is a More Detailed Financial Analysis Necessary?

After calculating the Operating Profit Margin, use the following criteria to **evaluate** the business unit's or product's profitability: (1) the Operating Profit Margin is a negative percentage in current or future years, and (2) the Operating Profit Margin is positive in current and future years, but has declined by more than 50% over a three-to five-year period.

- If the answer in either case is true, the company's financial viability merits further analysis to determine the causes of its weakening performance. Proceed then to **Step 3**.
- . If neither criterion holds true for the company, no further financial analysis is *generally* needed.

Profitability Analysis Example

An example of a profitability analysis is provided for the mythical CDE Widget Company (Table A-3).

Table A-3. Example of the CDE Widget Company Income Statement and Profitability Analysis (in thousands)

	Historical		Current	Projected	
Year	-2	-1	0	+1	+2
Units	2,000	1,750	1,250	1,000	900
Sales (Revenue)	100,000	87,500	62,500	50,000	45,000
- Cost of Goods Sold	40,000	35,000	25,000	20,000	18,000
- Selling Expenses	40,000	35,000	35,000	20,000	18,000
- General & Admin Expenses	7,000	8,000	8,000	9,000	10,000
= Operating Income	13,000	9,500	9,500	1,000	(1,000)
Operating Profit Margin	13%	11%0	11%0	2%	-2%0

Looking at the Income Statement in Table A-3, we see numbers indicating there may be a financial problem with this company.

- . Unit Production is declining, as is Sales (Revenue).
- Operating Income is projected to be negative in Projected Year 2, and is steadily declining.
- As we calculate percentage decrease,

$$\frac{(\text{Projected Year 2} - \text{Historical Year 2})}{\text{Historical Year 2}}$$

$$\frac{(-1,000 - 13,000)}{13,000}$$

$$= - 108\%$$

- . Operating Income decreases by 108%4o, which is far greater than 50%. Lookup the Standard Industrial Code (SIC) for widgets, and obtain the same data from companies (with the same SIC) similar to CDE Widget Company. While the industry is experiencing a downturn in operating income, the average decrease is 42% over the same period.
- . Likewise, Operating Profit Margin has a negative number in a projected year and has declined by more than 50% across. the period.

Therefore, you should continue the analysis. The sample worksheet depicted in Figure A-2 maybe provided to the Government’s financial representative or the contractor as a guide to obtain this required profitability information.

Figure A-2. Industrial Capability Financial Analysis Worksheet

Industrial Capability Financial Analysis

Contractor:

Point of Contact:

Phone:

Fax:

Action Requested:

Agency Office:

Point of Contact:

Phone:

Fax:

Summary Table					
	Historical		Current	Projected	
Year	-2	-1	0	+1	+2
Units					
Revenue					
- Cost of Goods Sold					
- General & Admin Expenses					
- Depreciation					
= Operating Income (01)					
Operating Margin (%) = (01/Revenue) x 100					

Calculate Return on Assets

So far you have used the Operating Profit Margin from the Income Statement as a primary indicator of a financial problem within the business. In addition to the Operating Profit Margin, other measures of profitability may be used, depending upon the specific business situation. For example, you can compute the company's Return On Assets (ROA) by adding information available from the Balance Sheet:

$$\text{ROA (from primary operations)}^2 = \text{Operating Income} / \text{Total Assets}$$

In this case, ROA indicates the amount of profitable return from the firm's primary operations being generated by the assets being used.

For the corporation as a whole, you can easily calculate ROA using numerical values taken directly from the Income Statement and Balance Sheet. To determine the profitability contribution by the product to the corporation, you should also calculate ROA at the product or business unit level:

$$\text{ROA (product)} = \text{Operating Income Derived from the Product} / \text{Total Assets Used To Produce-the Product}$$

ROA presents another view of a company's financial health by gauging how efficiently the company's assets are being used to produce the product or service. It measures how much the company's assets are earning in Operating Income.

STEP 3. PERFORM A COMPARATIVE ANALYSIS

Compare the financial performance of the business unit or product with those of other companies or with other business units within the same corporation. *At this point you may want to seek assistance from a more experienced financial or cost analyst*

Operating Profit Margin and ROA are two measures of performance that provide a means to evaluate the company's financial performance. From the firm's perspective, the question is whether its operations are earning an *adequate return*. Such a determination requires judgment. Comparison of returns across a number of dimensions (e.g., overtime, between divisions of the corporation) provide the basis for this judgment. Formats in Table A-4 through Tables A-6 are examples of how to compare profitability measures for the company with internal, external, and peer business unit measures.

- . Compare numerical measures calculated at the product or business unit level with similar calculations obtained at the corporate level to determine the importance of the product or business unit to the corporation (Table A-4).

Table A-4. Internal Comparison

	Sales	Operating Margin	ROA
Corporate			
Business Unit (BU)			
Item of Interest			

²The standard formula for ROA is Net Income divided by Total Assets. This standard definition is not as useful for our analysis because it does not focus on the firm's primary Operations or products.

- . Use these measures at various levels within the firm to compare the product or business unit performance on the DoD program of interest with other customers, e.g., commercial, other Government organizations, the DoD program of interest and other DoD customers outside program of interest (Table A-5).

Table A-5. External Comparison

	Sales	Operating Margin	ROA
Corporate			
Business Unit (BU)			
Item of Interest			
DoD			
Item of Interest			

- . Compare the product or business unit performance being measured to consistent calculations for similar products or business units (Table A-6). For example, competitors or related businesses may produce products that are similar or can be directly substituted for the item of concern. You may have to ask other DoD managers in other programs or product areas for information on similar products or business units.

Table A-6. Peer Comparison

	Sales	Operating Margin	ROA
Item of Interest			
Substitute Product			
Similar Product			

STEP 4. IDENTIFY THE PROBLEM

Use the information obtained in Step 3 to identify the specific financial problem that the company is encountering, as well as potential solutions. Having compared the measures of financial performance across a number of important dimensions, you should now be able to assess the company’s financial viability.

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